

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
16 June 2005 (16.06.2005)

PCT

(10) International Publication Number
WO 2005/053516 A3

(51) International Patent Classification⁷: **C07H 21/02**, 21/04, C12P 19/34, 21/00, C12N 15/09, 15/82, 15/85, 15/00, C12Q 1/70, 1/68

(21) International Application Number:
PCT/US2004/040120

(22) International Filing Date: 1 December 2004 (01.12.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/525,989 1 December 2003 (01.12.2003) US

(71) Applicant (for all designated States except US): **BOARDS OF REGENTS, THE UNIVERSITY OF TEXAS SYSTEM [US/US]**; 201 West 7th Street, Austin, TX 78701 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **LEMON, Stanley, M.** [US/US]; 1517 Bayou Shore Drive, Galveston, TX 77551 (US). **YI, MinKyung** [KR/US]; 7700 Seawall Blvd.#301, Galveston, TX 77551 (US).

(74) Agent: **PROVENCE, David, L.**; Mutting, Raasch & Gebhardt, P.A., P.O. Box 581415, Minneapolis, MN 55454-1415 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

(88) Date of publication of the international search report:
29 December 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 2005/053516 A3

(54) Title: REPLICATION COMPETENT HEPATITIS C VIRUS AND METHODS OF USE

(57) Abstract: The present invention provides replication competent polynucleotides that include a coding sequence encoding a hepatitis C virus polyprotein having adaptive mutations. The invention also includes methods for making replication competent polynucleotides, identifying a compound that inhibits replication of a replication competent polynucleotide, selecting a replication competent polynucleotide, and detecting a replication competent polynucleotide.